

Appl. No. 10/824,854
Reply to Office Action of July 18, 2006

Attorney Docket No. 2003-0964 / 24061.150
Customer No. 42717

REMARKS

Claims 17-27 are present in the application. In view of the remarks that follow, Applicants respectfully request reconsideration.

Independent Claim 17 is Not Anticipated by Lin

Independent Claim 17 stands rejected under 35 U.S.C. § 102 as anticipated by Lin U.S. Patent Application Publication No. 2005/0224786. This ground of rejection is respectfully traversed. The PTO specifies in MPEP § 2131 that, in order for a reference to anticipate a claim under § 102, the reference must teach each and every element recited in the claim. Claim 17 of the present application expressly recites "... a sill located within the electrode ...". The Examiner asserts that this is disclosed in Lin. Applicants respectfully disagree.

In more detail, pages 6-7 of the Office Action indicate that "claims must be interpreted as broadly as their terms reasonably allow". Then, to the extent Claim 17 recites "a sill located within the electrode", the Office Action asserts that a properly broad interpretation of this limitation will encompass not only a sill located within an electrode (as expressly recited in Claim 17), but also a sill that is not located within an electrode (or in other words the exact opposite of what is recited in Claim 17). In support of this, the Examiner asserts that Applicant's specification and drawings teach that:

... sill 250a "may" be formed inside feature 250, but "alternately" may be a plurality of layers formed on biasing feature 250.

However, Applicants respectfully submit that, in essence, the Examiner is importing language from the specification into Claim 17, in an attempt to establish that the phrase "a sill located within the electrode" is actually much broader than it appears on its face. This goes well beyond merely giving the limitation its broadest reasonable interpretation. Applicants agree that the recitation of "a sill located within the electrode" is entitled to its broadest reasonable interpretation. But it is respectfully submitted that, considering this limitation on its face

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(without importing language from the specification), this limitation does not reasonably cover a configuration where a sill is not located within an electrode.

Turning to the Lin reference, the Examiner asserts that Figure 2 of Lin is so similar to Figure 2 of the present application that it would be impossible to conclude that Figure 2 of Lin does not disclose a sill located within an electrode. Applicants respectfully disagree. With reference to paragraph 32 and Figure 2 in the present application, Figure 2 discloses a biasing feature 250 (such as a transistor gate electrode) that is made of a conductive material (such as doped polysilicon). The conductive feature 250 has a sill 250a located in it. On the other hand, and contrary to the assertions in the Office Action, the sills in Figure 2 of Lin are not disposed within a conductive material, but instead are disposed within a semiconductor material. More specifically, Figure 2 of Lin discloses four sills 260a, 260b, 260c and 260d that are each disposed in a respective part 230a, 230b, 230c or 230d made of semiconductor material. None of the sills 260a-260d in Figure 2 of Lin is located within an electrode or other conductive material.

Lin thus does not disclose each and every element that is recited in Claim 17, and therefore does not meet the PTO requirement for anticipation, as set forth in MPEP §2131. Consequently, Lin does not anticipate Claim 17 under §102. Claim 17 is therefore believed to be allowable over Lin, and notice to that effect is respectfully requested.

Independent Claim 17 is Not Anticipated by Montgomery

Independent Claim 17 also stands rejected under 35 U.S.C. §102 as anticipated by Montgomery U.S. Patent Application Publication No. 2004/0208454. This ground of rejection is respectfully traversed, for two reasons that are discussed separately below.

THE §102 REJECTION IMPROPERLY RELIES ON MULTIPLE EMBODIMENTS

As discussed in MPEP §2131, anticipation under §102 requires the presence in a single prior art reference of each and every element of the claimed invention, and the elements in the reference must be arranged as required by the claim. In other words, a reference underlying a §102 rejection must not only disclose each and every element in the claim, but must also disclose

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all of those elements in a single embodiment that contains the entire combination recited in the claim, including all of the recited interrelationships between the recited elements.

Montgomery discloses several different embodiments of an electro-optic modulator. In the present Office Action, the §102 rejection based on Montgomery is explained on pages 4-5, and expressly cites and relies on Figures 2-4, 16, 18 and 22 in Montgomery, and paragraphs 11, 51-54 and 67 in Montgomery. However, as evident from paragraphs 51-54 and 67, Figure 2 of Montgomery discloses a first embodiment, Figure 3 discloses a second embodiment, Figures 4 and 16 disclose a third embodiment, and Figures 5 and 18 disclose a fourth embodiment. Figure 22 does not relate directly to any of these four different embodiments, but instead relates to Figure 21, which is a diagram of a circuit that includes two electro-optic modulators 82 and 86, as well as some other components. Thus, the §102 rejection attempts to combine at least four and possibly five different embodiments disclosed in Montgomery. However, combining two or more embodiments always involves issues of obviousness (regardless of whether the embodiments are in the same reference, or in different references). To the extent that the present Office Action is combining multiple embodiments from Montgomery, the present Office Action needs to carry the burden of establishing a prima facie case of obviousness under §103, for example by meeting the requirements set forth in MPBP §2142 and §706.02(j). However, the present Office Action does not carry the burden of establishing a prima facie case of obviousness under §103. Nor does the Office Action establish anticipation under §102, which requires that a §102 rejection must be based on a single embodiment in the cited reference, and that single embodiment must include the entire combination recited in the claim, including all of the recited interrelationships between the recited elements. Since the present §102 rejection attempts to combine 4 to 5 different embodiments from Montgomery, it is respectfully submitted that the §102 rejection is inherently defective, and therefore must be withdrawn.

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MONTGOMERY DOES NOT DISCLOSE EACH AND EVERY CLAIM LIMITATION

Claim 17 of the present application expressly recites:

... a patterned feature located over the substrate and over the plurality of doped regions, the patterned feature being part of a transistor and comprising at least one electrode

As noted earlier, the PTO specifies in MPEP §2131 that, in order for a reference to anticipate a claim under §102, the reference must teach each and every element recited in the claim. On page 6, the present Office Action asserts that the electro-optic modulator shown in Figure 18 of Montgomery is a transistor, and therefore meets the express recitation in Claim 17 of part of a "transistor". Applicants respectfully traverse this assertion. The terms "transistor" and "electro-optic modulator" are both well-known terms of art, and each term designates a particular type of device. Persons skilled in the art are well aware of what a transistor is, are well aware of what an electro-optic modulator is, and are also well aware that an electro-optic modulator is different from a transistor. The Examiner interprets the word "transistor" to encompass an electro-optic modulator, but this is not consistent with the industry-accepted meaning of either term. Applicants have drafted Claim 17 to specifically refer to a "transistor" and, as discussed in MPEP §2111.01, this word is to be interpreted according to its industry-standard meaning, rather than some new and different meaning invented by the Examiner. Montgomery discloses several different electro-optic modulators, but none of them constitutes a "transistor" within the industry-standard meaning of the word "transistor". Montgomery thus does not disclose each and every element recited in Claim 17, and therefore does not anticipate Claim 17 under §102.

Summarizing, the §102 rejection based on Montgomery improperly attempts to combine 4 to 5 different embodiments, and it is therefore respectfully submitted that the rejection is inherently defective and must be withdrawn. Moreover, Montgomery discloses electro-optic modulators rather than a "transistor". Since Claim 17 recites a "transistor", Montgomery does not disclose each and every element that is recited in Claim 17, and thus does not anticipate

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Claim 17 under §102. Accordingly, for each of these mutually exclusive reasons, it is respectfully submitted that Claim 17 is allowable over Montgomery, and notice to that effect is respectfully requested.

Dependent Claims

Claims 18-27 each depend from Claim 17, and are also believed to be distinct from the art of record, for example for the same reasons discussed above with respect to Claim 17.

Conclusion

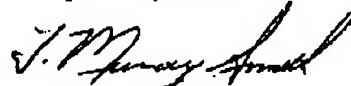
Based on the foregoing, it is respectfully submitted that all of the pending claims are fully allowable, and favorable reconsideration of this application is therefore respectfully requested. If the Examiner believes that examination of the present application may be advanced in any way by a telephone conference, the Examiner is invited to telephone the undersigned attorney at 972-739-8647.

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Although Applicants believe that no fee is due in association with the filing of this Amendment, the Commissioner is hereby authorized to charge any fee required by this paper, or to credit any overpayment, to Deposit Account No. 08-1394 of Haynes and Boone LLP.

Respectfully submitted,



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Date: August 11, 2006

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Enclosures: None

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